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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,847

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Masao Yamamoto

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EXAMINER

LIU, MICHAEL

ART UNIT

PAPER NUMBER

2851

MAIL DATE

DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/567,847

Applicant(s)

YAMAMOTO, MASAO

Examiner

Michael Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-22 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20060210, 20061116.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Receipt is acknowledged of the Preliminary Amendment filed 10 February 2006. Claims 9-11 have been amended, no claims have been canceled, and no claims have been newly added by this amendment.

#### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Camera using chromatic aberration, image processing, image data processing method and program.

#### ***Claim Objections***

3. Claim 5 is objected to because of the following informalities: It is unclear which claim number Claim 5 is dependent from. It has been assumed that Claim 5 is meant to be dependent from Claim 3.

Claims 5 and 15 are objected to because of the following informalities: The word "either" should be edited to --any-- to compensate for there possibly being more than two images.

Claim 6 is objected to because of the following informalities: The phrase "claimed Claim 2" should be revised to --claimed in Claim 2--.

Claim 11 is objected to because of the following informalities: "different kinds elements" should become --different kinds of elements--. "three kinds subject surface segments" should be --three kinds of subject surface segments--.

Appropriate correction is required.

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***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 and 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haga (JP 08-032978) in view of Finlayson (7,046,288).

**Re claims 1 and 22:** Haga discloses a camera 20 comprising: an objective lens 1 where an imaging light [left side of 1] enters; and image pickup means 5 that receives the imaging light directed after being passed through said objective lens to form an image, the image pickup means having a photosensitive surface [par 0017: CCD],

said objective lens being adapted to receive imaging lights from each of a plurality of subject surface segments [red, green, blue light filtered through using 2] located at different depths [see Fig 3] from said photosensitive surface and form an image on said photosensitive surface using chromatic aberration [see Abstract], each of the imaging lights having wavelength identical to one of said different wavelengths and being different from each other [par 0020].

Haga does not disclose expressly the photosensitive surface having different kinds of elements arranged in an array that are for generating predetermined signals in response to light in different wavelengths.

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Finlayson teaches a photosensitive surface [on CCD 12] having different kinds of elements arranged in an array [sensor array 12] that are for generating predetermined signals in response to light in different wavelengths [col 6, lines 50-52].

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the CCD of Finlayson into the camera of Haga, for the purpose of increasing the versatility of the image pickup means.

**Re claim 2:** Haga discloses a camera 20 comprising: an objective lens 1 where an imaging light [left side of 1] enters; image pickup means 5 having a photosensitive surface [par 0017: CCD] that receives the imaging light directed after being passed through said objective lens to form an image; and image processing means [digital disposal circuit 7; par 0024] for generating image data that are used to produce, on a predetermined display 22, an image taken by said image pickup means according to received said signal to send them to the outside,

said objective lens being adapted to receive imaging lights from each of a plurality of subject surface segments [red, green,, blue light filtered through using 2] located at different depths [see Fig 3] from said photosensitive surface and form an image on said photosensitive surface using chromatic aberration [see Abstract], each of the imaging lights having wavelength identical to one of said different wavelengths and being different from each other [par 0020],

said image processing means being adapted to generate, according to said signal generated by said different kinds of elements, image data with which the same

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number of a plurality of images produced by the same kind of said elements are provided as the number of said elements [image data produced by 7 for each image].

Haga does not disclose expressly the photosensitive surface having different kinds of elements arranged in an array that are for generating predetermined signals in response to light in different wavelengths.

Finlayson teaches a photosensitive surface [on CCD 12] having different kinds of elements arranged in an array [sensor array 12] that are for generating predetermined signals in response to light in different wavelengths [col 6, lines 50-52].

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the CCD of Finlayson into the camera of Haga, for the purpose of increasing the versatility of the image pickup means.

**Re claim 3:** wherein said image processing means is adapted to generate said image data with which said plurality of images generated by the same kind of said elements can be produced as separated images on predetermined display [par 0027].

**Re claim 4:** wherein said image processing means is adapted to generate said image data with which all of said plurality of images generated by the same kind of said elements can be produced at the same time on the predetermined display [par 0027].

**Re claim 5:** wherein said image processing means is adapted to generate said image data with which any of said plurality of images generated by the same kind of said elements can be selectively produced [by 10] on predetermined display [par 0028].

**Re claim 6:** wherein said image processing means 7 is adapted to generate said image data with which a single image that is formed according to said plurality of

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images generated by the same kind of said elements can be produced on the predetermined display 22.

**Re claim 7:** Haga discloses a camera 20 comprising: an objective lens 1 where an imaging light [left side of 1] enters; image pickup means 5 having a photosensitive surface [par 0017: CCD] that receives the imaging light directed after being passed through said objective lens to form an image; and image processing means 7 for generating image data that are used to produce, on a predetermined display 22, an image taken by said image pickup means according to received said signal to send them to the outside,

said objective lens being adapted to receive imaging lights from each of a plurality of subject surface segments [red, green,, blue light filtered through using 2] located at different depths [see Fig 3] from said photosensitive surface and form an image on said photosensitive surface using chromatic aberration [see Abstract], each of the imaging lights having wavelength identical to one of said different wavelengths and being different from each other [par 0020],

said image processing means 7 being adapted to generate, according to said signal generated by said different kinds of elements, said image data with which images in colors of only the same hue [using 2] can be produced on a predetermined display.

Haga does not disclose expressly the photosensitive surface having different kinds of elements arranged in an array that are for generating predetermined signals in response to light in different wavelengths.

Finlayson teaches a photosensitive surface [on CCD 12] having different kinds of elements arranged in an array [sensor array 12] that are for generating predetermined signals in response to light in different wavelengths [col 6, lines 50-52].

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the CCD of Finlayson into the camera of Haga, for the purpose of increasing the versatility of the image pickup means.

**Re claim 8:** Haga discloses a camera 20 comprising: an objective lens 1 where an imaging light [left side of 1] enters; image pickup means 5 having a photosensitive surface [par 0017: CCD] that receives the imaging light directed after being passed through said objective lens to form an image; and image processing means 7 for generating image data that are used to produce, on a predetermined display 22, an image taken by said image pickup means according to received said signal to send them to the outside,

said objective lens being adapted to receive imaging lights from each of a plurality of subject surface segments [red, green,, blue light filtered through using 2] located at different depths [see Fig 3] from said photosensitive surface and form an image on said photosensitive surface using chromatic aberration [see Abstract], each of the imaging lights having wavelength identical to one of said different wavelengths and being different from each other [par 0020],

said image processing means 7 being adapted to generate, according to said signal generated by said different kinds of elements, said image data with which achromatic images can be produced on a predetermined display 22 [par 0027].



Haga does not disclose expressly the photosensitive surface having different kinds of elements arranged in an array that are for generating predetermined signals in response to light in different wavelengths.

Finlayson teaches a photosensitive surface [on CCD 12] having different kinds of elements arranged in an array [sensor array 12] that are for generating predetermined signals in response to light in different wavelengths [col 6, lines 50-52].

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the CCD of Finlayson into the camera of Haga, for the purpose of increasing the versatility of the image pickup means.

**Re claims 12, 20, and 21:** Haga discloses an image processor 7 that is used in combination with a camera 20 comprising: an objective lens 1 where an imaging light [left side of 1] enters; image pickup means 5 having a photosensitive surface [par 0017: CCD] that receives the imaging light directed after being passed through said objective lens to form an image; and output means [from 7] that sends, to the outside, received said signal, said objective lens being adapted to receive imaging lights from each of a plurality of subject surface segments [red, green,, blue light filtered through using 2] located at different depths [see Fig 3] from said photosensitive surface and form an image on said photosensitive surface using chromatic aberration [see Abstract], each of the imaging lights having wavelength identical to one of said different wavelengths and being different from each other [par 0020], the image processor being adapted to provide the control to produce, on a predetermined display 22, an image according to said signal received from said output means,

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the image processor comprising: means for receiving said signal; processing means for generating, according to received said signal, image data with which the same number of a plurality of images produced by the same kind of said elements can be produced on said display as the number of said elements; and means for sending, to the outside, generated said image data to said display means [par 0027].

Haga does not disclose expressly the photosensitive surface having different kinds of elements arranged in an array that are for generating predetermined signals in response to light in different wavelengths.

Finlayson teaches a photosensitive surface [on CCD 12] having different kinds of elements arranged in an array [sensor array 12] that are for generating predetermined signals in response to light in different wavelengths [col 6, lines 50-52].

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the CCD of Finlayson into the camera of Haga, for the purpose of increasing the versatility of the image pickup means.

**Re claim 13:** wherein said processing means is adapted to generate said image data with which said plurality of images generated by the same kind of said elements can be produced as separate images on said display [par 0027].

**Re claim 14:** wherein said processing means is adapted to allow simultaneous production of all of said plurality of images generated by the same kind of said elements on said display [par 0027].

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**Re claim 15:** wherein said processing means is adapted to allow selective production [by 10] of any of said plurality of images generated by the same kind of said elements [par 0028].

**Re claim 16:** wherein said processing means is adapted to allow production of an image on said display, the image being generated by overlapping said plurality of images generated by the same kind of said elements [par 0027; see Fig 1].

**Re claim 17:** wherein said processing means is adapted to allow production of an image on said display, the image being generated by converting said plurality of images generated by the same kind of said elements and then overlapping them [par 0027; see Fig 1].

**Re claim 18:** wherein said processing means 7 is adapted to generate, according to said signal generated by said different kinds of elements, said image data with which images in colors of only the same hue can be produced on said display 22.

**Re claim 19:** wherein said processing means 7 is adapted to generate, according to said signal generated by said different kinds of elements, said image data with which achromatic images can be produced on said display 22 [par 0027].

***Allowable Subject Matter***

6. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: There is no prior art that discloses, in combination with the other claim limitations, said plurality of subject surface segments are separated from each other.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Liu whose telephone number is 571-272-9019. The examiner can normally be reached on Monday through Friday 9 am - 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Liu  
Examiner  
Art Unit 2851

ML 20070917



DIANE I. LEE  
SUPERVISORY PATENT EXAMINER